



Edwards Air Force Base

95th Air Base Wing

Civil Engineer and Transportation Directorate  
Environmental Management Division

# **Report to** **STAKEHOLDERS**

January 2007

Volume 12 No. 1

## ***Badgers, coyotes and buzz; Environmental Management goes to the 2006 Air show***

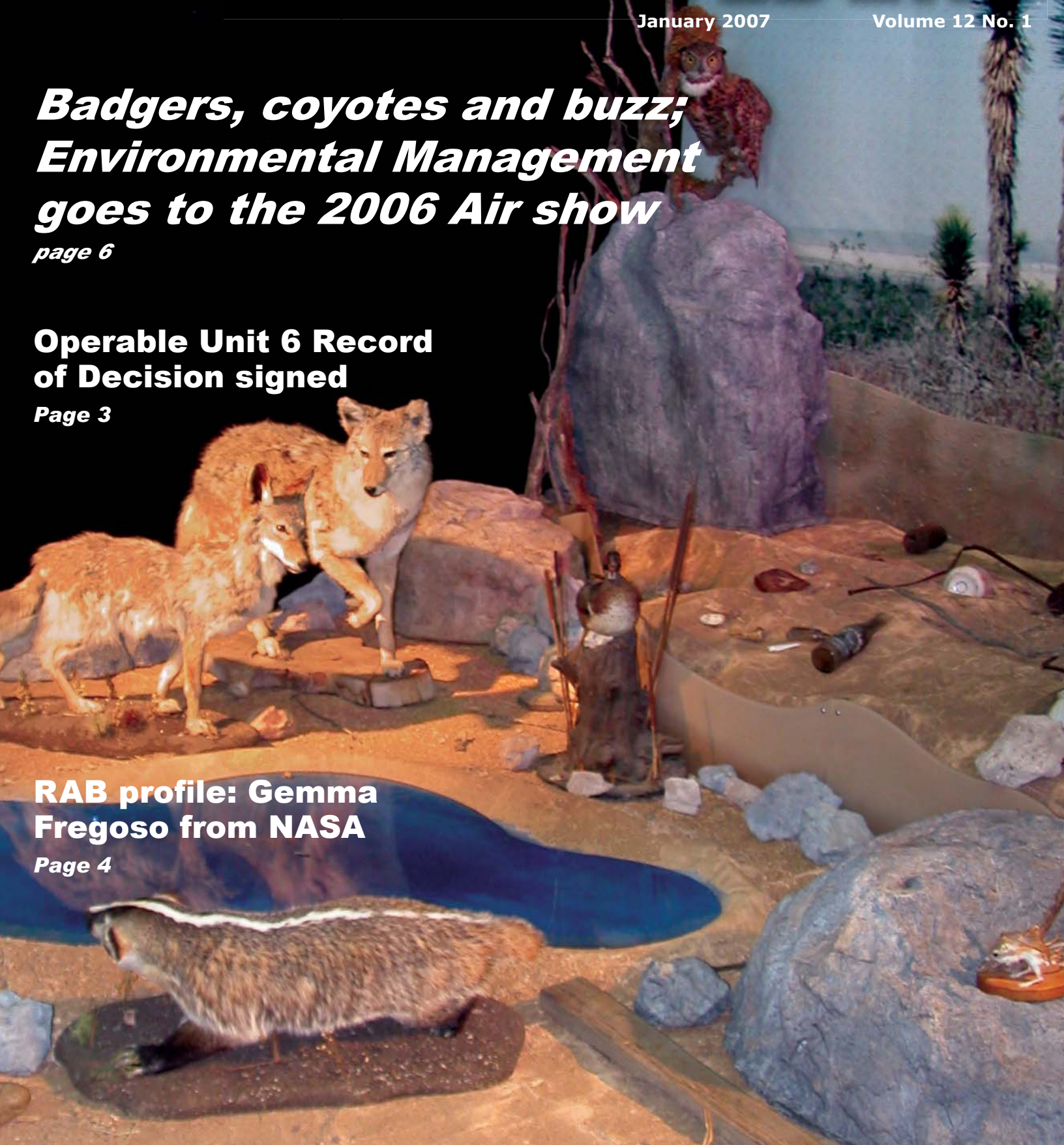
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## **Operable Unit 6 Record of Decision signed**

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## **RAB profile: Gemma Fregoso from NASA**

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## Report to STAKEHOLDERS

*Report to Stakeholders* is a publication of the Edwards Air Force Base Environmental Management Division. Its purpose is to inform and educate the public, base workers and residents about continuing Environmental Management efforts on base. It currently has a circulation of 6,000, including about 2,000 subscribers.

Contents of the *Report to Stakeholders* are not necessarily the official view of, or endorsed by, the U.S. government, the Department of Defense or the Department of the Air Force.

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*Gerald Callahan*

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Environmental Quality**  
*Robert Shirley*

### Next RAB Meeting

**Feb. 8, 2007**

**5:30 p.m.**

**California City**

**Community Center**

**10400 Heather Avenue**

**The public is invited**

If you have a question about the Edwards Air Force Base Environmental Management program, you may address it to Stakeholders Forum, Attn: Gary Hatch or Miriam Horning, 5 E. Popson Ave., Bldg. 2650A Edwards AFB, CA 93524-8060, or send e-mail to: [95ABW.PAE@edwards.af.mil](mailto:95ABW.PAE@edwards.af.mil)

## Stakeholders Forum

**Q.** What is green power and who is using it?

**A.** Green power is electrically generated from renewable energy resources such as solar, wind, geothermal, biogas, biomass and low-impact water resources. Green power resources contribute little to no greenhouse gas emissions. Voluntary purchases of green power also help to accelerate the development of new, domestic renewable energy facilities, further increasing our nation's energy security.

The United States Environmental Protection Agency (U.S. EPA) developed Green Power Partnerships to encourage organizations to purchase green power as a way to reduce the environmental impacts associated with conventional electricity use. EPA works with a wide variety of leading organizations such as Fortune 500 companies, local, state and federal governments, trade associations, as well as colleges and universities to develop and use green power.

The U.S. Air Force tops the list of all EPA's green power partners. The top 10 on that list follow:

- |                       |                              |
|-----------------------|------------------------------|
| 1. U.S. Air Force     | 2. Wells Fargo and Company   |
| 3. Whole Foods Market | 4. EPA                       |
| 5. Johnson & Johnson  | 6. Starbucks                 |
| 7. DuPont Company     | 8. U.S. Department of Energy |
| 9. Vail Resorts       | 10. HSBC North America       |

A purchasing guide, locator, the green power partners list and more information about green power can be found at [www.epa.gov/greenpower/](http://www.epa.gov/greenpower/). The list is updated quarterly. Consumers can choose to buy green power when purchasing electricity.



# Base signs first action ROD for environmental cleanup

**E**dwards Air Force Base signed its first action Record of Decision (ROD) Sept. 25, 2006, setting the final environmental cleanup strategy for NASA's Dryden Flight Research Center.

Col. H. Brent Baker Sr., 95th Air Base Wing commander, signed the ROD. It was immediately forwarded to the Environmental Protection Agency's Region IX office, which signed it Sept. 27 and forwarded it to California's Department of Toxic Substances Control for signature.

It is one of 10 RODs that will be signed by the base and its regulatory agencies over the next several years to put in place cleanup solutions for all of the sites on base that still have environmental contamination.

This ROD covers Operable Unit 6, the NASA area, and spells out how the Air Force and NASA will clean up three shallow groundwater sites contaminated with fuels and solvents.

The underground contamination at NASA Dryden is related to aircraft work conducted at the site in the past. Air Force and NASA workers started looking for contamination in 1987, looking first at 19 places where hazardous materials were used or stored. NASA funds the environmental cleanup effort in its area.

After a thorough investigation – drilling wells and taking hundreds of soil and groundwater samples – workers determined there are three sites where groundwater is contaminated with chemicals harmful to human health and the environment.

The contaminated groundwater in this area is shallow and not used for drinking water. No drinking water wells are threatened by the contamination.

The ROD calls for the sites to be treated with chemical oxidation, land use controls and groundwater monitoring.

Chemical oxidation refers to injecting chemicals into the ground that react with the contamination to create harmless byproducts. Two different chemicals, Fenton's reagent and permanganate, have already worked in tests in this area.

Land use controls refer to limiting use of the site to ensure people don't come



**SEAL OF APPROVAL** — From left, NASA Dryden Environmental Program Manager Dan Morgan, Restoration Branch Chief Ai Duong, Restoration Program Manager Tom Merendini and Environmental Management Division Chief Robert Wood with 95th Air Base Wing Commander Col. H. Brent Baker, Sr., as he signs the Operable Unit 6 Record of Decision.

into contact with the harmful chemicals. Edwards AFB accomplishes this by several means. The Air Force and NASA Dryden don't allow access to the sites except for workers. All projects on base require approval for construction or digging in the soil. Information on the contamination is included in the Edwards AFB Geographic Information System. This system allows users to find out everything they need to know about a piece of land before a project is started. If workers do need to dig in the area, they can wear protective equipment.

Groundwater monitoring and

hydrologic control refers to sampling the water regularly through monitoring wells and installing equipment, if necessary, to keep the contaminated groundwater from moving.

According to the ROD, chemicals will be injected only in areas where the contamination is most concentrated. The rest of the contamination will dilute to safe levels. The ROD calls for drilling 23 new wells to accomplish this. It will take more than 10 years and is projected to cost \$1.9 million to clean the groundwater in this area.



## Restoration Advisory Board Member Profile

# NASA Dryden gains a primary representative

**G**emma Fregoso took the seat as the primary Restoration Advisory Board (RAB) representative for the NASA Dryden complex, replacing William Brandweiner in June 2006.

Brandweiner is taking the alternate seat to represent the complex when, and if, Fregoso is unavailable. Fregoso is a facilities architect and project manager for the NASA Dryden Flight Research Center at Edwards AFB.

Her interest in the cleanup efforts grew after hearing about the trichloroethene contamination in the groundwater at the NASA Dryden Flight

Research Center. "When I heard about the contamination in the groundwater, I was concerned about how this might affect me and my colleagues," Fregoso said.

She saw an announcement for a public meeting at the NASA Dryden complex for the Operable Unit 6 Proposed Plan and decided to attend. A proposed plan is a part of the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* process, commonly known as Superfund. The Environmental Restoration Program follows the Superfund process for the cleanup of past contamination.

Fregoso was the only public member at that meeting and former NASA Dryden primary RAB representative, Brandweiner, encouraged her to be a part of the board.

"I was a little nervous to take on this responsibility at first





but Bill (Brandweiner) assured me that the other RAB members and program managers were approachable and that I could learn a lot from them,” Fregoso said.

Fregoso decided to read information about the cleanup efforts at Edward AFB and started handing out copies of the *Report to Stakeholders* around the NASA Dryden community. Much of the information she read answered many of her own questions and she realized the importance of sharing this knowledge.

“I wondered how many people don’t even know about the contamination or aren’t well-informed. My concerns led me to read as much as I could about the contamination so that I can be knowledgeable enough to speak for and answer questions for the NASA Dryden community,” Fregoso said.

“At my first RAB meeting, I was excited to see that the public was interested in the cleanup efforts. Even when nothing requires public members to attend or take an interest, they were there and that was encouraging.”

Going beyond what is required or expected of her is something Fregoso practices every day. She takes pride in a job well done and wants to bring that aspect of her professional life to the RAB.

“I plan my projects in a way that demonstrates that we took the time to think about the design and make the exhibit, facility or building aesthetically pleasing and practical,” Fregoso said, “I wouldn’t want to design something that looks like an afterthought.”

She has worked on projects ranging from designing a fitness center to managing and designing the SR-71 display near the NASA Dryden visitor’s parking lot. She finished the latter project in time for NASA’s 60th Anniversary. She is currently working on a new Information Technology Data Facility and creating a new visitor’s center at the NASA Dryden complex.

In dealing with the leadership in energy and environmental design or green building standards for her projects, Fregoso has experience understanding and following environmental standards. She thinks that her experience and knowledge from working with environmental standards, reading about the cleanup efforts and attending public and RAB meetings will directly affect her involvement with the NASA Dryden community.

“I think the biggest challenge I will face being a RAB member will be balancing my job, my new baby and my involvement with the RAB,” Fregoso said, “but I look forward to representing the NASA Dryden community. I want the people who work there to know that they can come to me with questions for the other RAB members or program managers of the cleanup sites and I’ll represent them as best as I can.”

Fregoso is looking to raise levels of awareness and represent the NASA Dryden community appropriately. Her goal is to focus on



**BLUEPRINTS** — Fregoso goes over blueprints for a project she is working on.

bringing cleanup information to the hands of those she represents through the *Report to Stakeholders* to make them aware of the contamination that affects them, how it affects them, if it does affect them, and how it is being managed. Fregoso looks forward to learning more about the cleanup efforts and getting involved.

Fregoso graduated from the California State Polytechnic University Pomona in 2004 with a bachelor’s degree in architecture and has worked at the NASA Dryden complex for about two years. Fregoso and her husband live in Tehachapi, Calif., and just welcomed their new baby in November.

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**SR-71 DISPLAY** — Fregoso stands in front of the SR-71 display, left, at the NASA Dryden visitor’s parking lot, finished in time for NASA’s 60th Anniversary last October. She designed the display.

# EM displays spark interest among Open House and Air Show crowd

**E**nvironmental Management got to show its stuff at the Edwards 2006 Open House and Air Show. Over 70,000 people from around the world attended the event Oct. 28 and 29. A variety of displays, booths and professionals showed visitors what they do and how they support the base.

At Edwards AFB, the mission and the natural environment go hand in hand. The unique physical environment makes the high desert an ideal place for flight test and evaluation. The mission of Environmental Management is to help the flight testers and other units on base maintain access to air, land and water for flight test, operations, research and other activities, while protecting the delicate balance of the desert ecosystem. Appropriate personnel are consulted during the planning and implementation stages of all test programs and construction projects on base.

“The environmental displays – both Environmental Management’s and Fort Irwin’s – at the 2006 Air Show were extraordinary,” said Bob Wood, division chief for Environmental Management. “The lighting, scaffolding, banner, flow of visitors through two bales, the new environmental buzz game, house plants and pH exhibits were very popular, and from my discussions with the visitors, I think our efforts to improve the display really paid off.”

Brainstorming by those who work at Environmental Management led to the



**ATTENTION GRABBER** — *Biologist Wesley King, right, holds a king snake while visitors touch it. The Natural Resources booth was just one of many booths that Environmental Management programs displayed.*

improvements and the new look. Additions included an environmental buzz game where contestants won prizes by answering questions and everyone walked away a winner. Cultural Resources workers added to their display a colorful mass of deflated Mylar balloons found in the desert. These balloons are collected when archaeologists or range riders are out in the field throughout the year. They were added to the display to illustrate the impact Mylar balloons can have on the environment.

Archaeologists answered

questions and got the public interested in the abundance of history that is attached to and can be found on the base with static displays and educational literature.

The Range Rider Program, a part of Cultural Resources, was established about four years ago to document any out-of-the-ordinary activity on or near the base. They protect key archaeological sites, find new ones and report unauthorized activity.

The only missing piece at the show was the adult desert tortoise, which is usually out at

these types of events. Because of hibernation, biologists were unable to get one for the show. The Natural Resources display included a live desert scorpion, desert tarantula, tortoise hatchling, snakes and the Natural Resources display. The display exhibited a variety of taxidermy animals which represented the animals that can be found on base (Note: all of those animals had suffered natural or vehicle-related deaths).

Air quality workers presented information on what one can do to prevent air pollution, showed



some causes of air pollution, had a display of house plants and were ready to discuss the benefits of having one or a few in the home or office.

Other Environmental Management programs that participated in the Air Show were solid waste, hazardous waste, Geographic Information Systems and the Base Environmental Analytical Laboratory – which gave hands-on demonstrations of pH testing.

So not only did visitors of the Air Show get to enjoy the aircraft, but some also got the opportunity to participate and see what Environmental Management is all about.

“I was very satisfied with Environmental Management’s participation in the Air Show. The displays were continually busy, the visitors did much more than walk past, they actively engaged the professionals by asking questions and leaving with new information,” Wood said. “As an outreach event we made a positive statement that Edwards AFB really cares about the environment and compliance. Many of the visitors were not from the area so the overall impression that we have a professional program was more important than the details of specific projects.”



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**EXPERIMENT** — Two young visitors try their hand at chemistry at the Base Environmental Analytical Laboratory’s pH demonstration booth.

## Restoration Advisory Board Meeting Highlights



**INFORMING** — Air Force Research Laboratory (AFRL) representative Milton McKay, left, lets everyone at the Restoration Advisory Board meeting know of any concerns at the AFRL. California City representative Bob Smith looks on.

The following report highlights the latest quarterly meeting of the Restoration Advisory Board (RAB) held Nov. 16, 2006, in Lancaster, Calif.

### Final Remedies for Eight Sites at Operable Unit 2

(OU2) – Environmental Restoration Program Manager Rebecca Hobbs went over the final remedies selected for the eight South Base sites in OU2. These remedies will be documented in the Record of Decision (ROD). There are four sites where the groundwater is contaminated and four sites that have debris. The sites with contaminated groundwater are: Site 5, the South Base waste petroleum, oil, and lubricants storage area; Site 14, the South Base fire fighting training area; Site 76, old South Base assorted facilities; and Site 86, the building 300 engine test cell. The sites with debris are: Site 29, the South Base abandoned sanitary landfill; Site 69, the old South Base north landfill; Site 81, the old South Base northern skeet range; and Site 102, the old South Base southern skeet range. After the OU2 ROD is finalized, the Environmental Restoration Program will begin preparation of Remedial Designs for selected remedies, then the selected remedies will be implemented.

### NASA Dryden Operable Unit 6 Record of Decision

**Update** – Tom Merendini, program manager for OU6 gave a presentation on the OU6 ROD that was signed September 2006. More information can be found on page 3.

The next meeting of the RAB will be Feb. 8, 2007 at 5:30 p.m. in California City, Calif., at the Community Center, 10400 Heather Ave.

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## Where to Find More INFORMATION

Published data and documents relating to the Environmental Restoration Program are available for public review in information repositories at four locations. The current information repositories are located in the cities of Boron, Lancaster and Rosamond, as well as Edwards AFB. They are updated when new documents are released.

If you have any questions about information in the repositories, please contact Gary Hatch, Environmental Public Affairs at (661) 277-1454 or by e-mail at [95ABW.PAE@edwards.af.mil](mailto:95ABW.PAE@edwards.af.mil).

Location	Days	Hours
<b>Edwards AFB Library</b> 5 W. Yeager Blvd. Building 2665 Edwards AFB, Calif. (661) 275-2665	Mon-Thurs Fri Sat & Sun	9:30 a.m. - 7 p.m. 9:30 a.m. - 6 p.m. 10:30 a.m. - 6 p.m.
<b>Kern County Public Library Wanda Kirk Branch</b> 3611 Rosamond Blvd. Rosamond, Calif. (661) 256-3236	Tues & Wed Thurs-Sat	Noon - 8 p.m. 10 a.m. - 6 p.m.
<b>Los Angeles County Public Library</b> 601 W. Lancaster Blvd. Lancaster, Calif. (661) 948-5029	Mon-Wed Thurs & Fri Sat	10 a.m. - 8 p.m. 10 a.m. - 5 p.m. 11 a.m. - 5 p.m.
<b>Col. Vernon P. Saxon, Jr. Aerospace Museum</b> 26922 Twenty Mule Team Road Boron, Calif. (760) 762-6600	Mon-Sun	10 a.m. - 4 p.m.



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